

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

VIRTAMOVE, CORP.,

Plaintiff,  
v.

HEWLETT PACKARD ENTERPRISE  
COMPANY,

Defendant.

Case No. 2:24-cv-00093-JRG  
(Lead Case)

**JURY TRIAL DEMANDED**

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VIRTAMOVE, CORP.,

Plaintiff,  
v.

INTERNATIONAL BUSINESS MACHINES  
CORP.,

Defendant.

Case No. 2:24-CV-00064-JRG  
(Member Case)

**JURY TRIAL DEMANDED**

**VIRTAMOVE'S RESPONSIVE CLAIM CONSTRUCTION BRIEF**

**(IBM PATENTS)**

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## I. Introduction

IBM's patents are ambiguous on their face, and IBM refuses to provide any meaningful clarity regarding claim scope to cure the issues. As one example, certain claims recite "the system resources" without providing previous antecedent basis, yet IBM and its expert Dr. Stavrou refuse to explain what they believe provides antecedent basis for that term, while conceding that the term refers back to something. Likewise, for "instance of an image," the patent contains two separate and inconsistent lexicographical definitions, yet IBM and Dr. Stavrou reject *both* of these definitions and proposes a construction that is inconsistent with *both of them*.

IBM's insistence on advancing terms that are facially ambiguous in view of the intrinsic record while failing even to attempt to clarify those terms through the claim construction process should be rejected. The Court should either apply a sensible meaning that resolves the ambiguities, or if none can be found, the claims should be held indefinite.

## II. Claim Terms for the '500, '634, and '038 Patents

- A. "A system, comprising ...wherein the one or more isolated environments are created during installation of the one or more applications ... wherein the one or more isolated environments are removed as part of an uninstall of the one or more applications" (claim 1 of the '500, '634, and '038 patents)

IBM's Proposed Construction	VirtaMove's Proposed Construction
Plain and ordinary meaning	Indefinite

As explained in the following sections, the claims are indefinite. "[A] single claim covering both an apparatus and a method of use of that apparatus is indefinite under section 112, paragraph 2," and claims 1 of each of the '500, '634, and '038 patents does just that. *MasterMine Software, Inc. v. Microsoft Corp.*, 874 F.3d 1307, 1313 (Fed. Cir. 2017) (citing *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377 (Fed. Cir. 2005)). Specifically, each of these claims recites a

“system” along with methods of using that system, with method steps of “creat[ing]” and “remov[ing]” isolated environments.

To escape indefiniteness, IBM contends that the claimed system must be able to perform the recited steps “independently of user intervention.” *See* Dkt. 142 at 10 (“Further, a POSITA would have understood with reasonable certainty that the claimed system performs these functions independently of user intervention.”). If the Court *does* find the scope of these claims to be understandable with reasonable certainty, IBM should be held to that contention.

**i. Claim 1 of each of the ’500, ’634, and ’038 patents is indefinite.**

Claim 1 of the ’500 Patent is representative, and recites:

***1. A system, comprising:***

one or more central processing units; and

one or more isolated environments including one or more applications and executables;

wherein the one or more central processing units and the one or more isolated environments are configured to interact with each other;

***wherein the one or more isolated environments are created*** during installation of the one or more applications, and updates to the one or more isolated environments occur as the one or more applications use additional resources;

***wherein the one or more isolated environments are removed*** as part of an uninstall of the one or more applications;

wherein the one or more isolated environments are stored for retrieval at a later time after the uninstall of the one or more applications.

Ex. 1 at Claim 1 (13:23-39).<sup>1</sup>

The claim expressly recites a “system,” but also expressly requires performance of method steps, including creating and removing “one or more isolated environments.” The claim context

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<sup>1</sup> All emphasis added unless otherwise specified. Numbered exhibits are exhibits to Dkt. 142; lettered exhibits are exhibits to this filing.

also confirms that this does not merely recite a *configuration* of the system. When the patentee wished to claim *configured to* perform a step, that phrase was used. *Id.* (“wherein the one or more central processing units and the one or more isolated environments *are configured to interact* with each other”).

Indeed, IBM’s own expert agreed that in order for the claims to be practiced, the recited method steps *must be performed* (not merely that the system must be *configured to* perform or *capable of performing* the method steps). For example, he acknowledged that in order to practice the claims, “the one or more isolated environments *must be created* during installation of the one or more applications.” Ex. A at 9:7–10:15 (“Q. So in order to practice the limitation..., you agree that the one or more isolated environments must be created during installation of the one or more applications. Correct? A. That is correct.”). Dr. Stavrou thus admitted that the claim does not merely require configuration or capability, but also requires that the method steps *actually be performed* in order for infringement to occur.

This understanding is fatal to the claims, because “a single claim covering both an apparatus and a method of use of that apparatus is indefinite under section 112, paragraph 2.” *MasterMine*, 874 F.3d at 1313 (citing *IPXL*, 430 F.3d 1377). The method steps cover the use of the claimed apparatus, not the apparatus itself—precisely what *IPXL* and its progeny prohibit.

Indeed, the Federal Circuit has explicitly addressed a scenario where a claim recites a system *and* method steps performed by that system (even if the method need not be performed by a user), and concluded the result would be indefiniteness. Specifically, in *HTC Corp. v. IPCom GmbH & Co., KG*, 667 F.3d 1270 (Fed. Cir. 2012), the Federal Circuit considered the following claim:

[1] A *mobile station* for use with a *network including* a first base station and a second base station *that* achieves a handover from the first base station to the second base station by:

- [2] storing link data for a link in a first base station,
- [3] holding in reserve for the link resources of the first base station, and
- [4] when the link is to be handed over to the second base station:
- [5] initially maintaining a storage of the link data in the first base station,
- [6] initially causing the resources of the first base station to remain held in reserve, and
- [7] at a later timepoint ... deleting the link data from the first base station and freeing up the resources of the first base station, *the mobile station comprising*:
- [8] an *arrangement for reactivating* the link with the first base station if the handover is unsuccessful.

*Id.* at 1274 (emphases in original). In that case, “[t]he parties disagree[d] whether the mobile station or the network, both recited in paragraph 1, implements the six functions enumerated in paragraphs 2-7.” *Id.* The Federal Circuit made clear, however, that “[i]f the mobile station implements the functions, the claims are indefinite because they recite both an apparatus—the mobile station—and method steps—the functions enumerated in paragraphs 2-7.” *Id.*

Ultimately, the *HTC* court concluded that it was **not** the mobile station that performed the recited functions, but rather those functions were “functions [of] the underlying network environment in which the mobile operates.” *Id.* at 1277.<sup>2</sup> But the court made clear that the claims **would** be indefinite if they “recite[d] a mobile station and then ha[d] the mobile station perform the six enumerated functions.” *Id.*

The counterfactual in *HTC* is precisely the scenario here. Under IBM’s allegations, it is the claimed “system” that performs the recited functions of creating “the one or more isolated environments” and “remov[ing]” those isolated environments. Dkt. 142 at 10 (“the claimed system

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<sup>2</sup> In other words, the mobile station needed to be designed “for use with a network... that achieves a handover... by” performing the recited functions (*see id.* at 1274), such that the recited functions did not need to be practiced by the mobile station itself and thus the claim did not recite a method of use of the mobile station.

performs these functions”). And IBM’s own expert acknowledged that these steps **must be** performed in order to practice the claim. Accordingly, the claims are “indefinite because they recite both an apparatus...—the [system]—and method steps—the functions [of creating and removing the one or more isolated environments].” *Cf. HTC Corp.*, 667 F.3d at 1274.

IBM implies that unless a claim **requires** a **user** (rather than the system) to perform the recited method steps, the claim cannot be indefinite under *IPXL* and its progeny. *See* Dkt. 142 at 7-10 (incorrectly characterizing VirtaMove’s indefiniteness position as requiring that “a **user** must perform the claimed installation/uninstallation”). But that is a mischaracterization of cases in which one party argued that the claims **did** require user action for infringement, and the other party argued that the claims merely described the configuration of a particular system component. In each of those cases, then, the courts held the claims indefinite because the claims **didn’t** require the user action as the party alleging indefinites had argued. *See, e.g., Freeny v. Fossil Grp., Inc.*, No. 2:18-cv-00049-JRG-RSP, 2019 WL 2078783, at \*25 (E.D. Tex. May 10, 2019) (finding no indefiniteness because “each verb in Claim 90 is tied to a structure (i.e., the proximity service units, the computer unit, and the communication unit)” rather than something that could be accomplished by a user); *Traxcell Techs., LLC v. Huawei Techs. USA Inc.*, No. 2:17-cv-00042-RWS-RSP, 2019 WL 121966, at \*17 (E.D. Tex. Jan. 7, 2019) (holding that a “recitation that ‘a user ... is able to set a no access flag [within the memory of said first computer]’ is facially directed to machine capability” of the first computer). But those cases do not stand for the proposition that a claim cannot be indefinite under *IPXL* **unless** the claims **require** user behavior, and such a reading of those cases would be directly contrary to *HTC Corp.*

Whether recited functional language is directed to the configuration of particular structures or is impermissibly directed to method steps depends on whether the recited functionality is



“divorced from the recited structure.” *UltimatePointer, L.L.C. v. Nintendo Co.*, 816 F.3d 816, 827 (Fed. Cir. 2016). *UltimatePointer* (which IBM relies upon) involved a claim which recited in part an “apparatus comprising... an image sensor, **said image sensor generating data....**” *Id.* at 819. In that case, the functionality was clearly something to be performed by a specific recited structure within the apparatus—an “image sensor.” *Id.* at 827-828 (“the ‘data generating’ limitations only indicate that the associated structures have this capability (for example, the image sensor and processor in claim 1)”). If no specific structure is tied to the functional language, however, **any** usage of the claimed system that potentially performed the functionality could infringe (including usage that depended on the specific manner in which the user used the system).

This is precisely what *IPXL* found problematic: “it is unclear whether infringement... occurs when one creates a system that **allows** the user to [perform the functionality], or whether infringement occurs when the user actually **uses**” the system to perform that functionality. *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1384 (Fed. Cir. 2005). The Federal Circuit has been consistent since *IPXL*, that any system claim that would depend on whether or not a user might operate the accused system in a manner that infringes is indefinite.

*Microprocessor Enhancement Corp. v. Texas Instruments Inc.*, 520 F.3d 1367, 1375 (Fed. Cir. 2008), which IBM also purports to rely upon, is in accord. The claim at issue in *MEC* made clear that a particular recited structure—a “condition execution decision logic pipeline stage”—within the claimed “pipelined processor” was the structure that needed to be configured to perform the recited functionality. *Id.* at 1371 (“A pipelined processor... comprising... a conditional execution decision logic pipeline stage, ... the conditional execution logic pipeline stage performing a Boolean algebraic evaluation....”). Thus, the court correctly held that the claim “**is**

*clearly limited to a pipelined processor* possessing the recited structure and capable of performing the recited functions, and is thus not indefinite under *IPXL Holdings*.” *Id.* at 1375.

In contrast, the IBM patents do not “clearly limit[]” the recited functionality to *any* recited structure. While IBM appears to argue that the recited functionality is tied to the “system,” the Federal Circuit has made clear that the entirety of the claimed system cannot provide sufficient structure. *See HTC Corp.*, 667 F.3d at 1274 (making clear that if the recited functionality were tied only to the claimed system—a “mobile device”—the claim would have been indefinite). And as noted in the following subsection (Section II.A.ii), IBM itself alleges infringement by mapping that the claimed functionality to specific user action, making clear that there *is* ambiguity regarding whether user action can satisfy the claim language. Accordingly, the claims are indefinite.

IBM raises two additional arguments: first, that the use of “passive voice” is supportive of IBM’s position, and second, that IBM’s expert testimony can salvage the ambiguity of the claims. Each of these arguments fails. Dkt. 142 at 7-8, 10.

First, IBM’s reliance on “passive voice” as supposedly helping (rather than worsening) the clarity of the claims is based entirely on a single case: *RightQuestion, LLC v. Samsung Elecs. Co.*, No. 2:21-cv-00238-JRG, 2022 WL 1154611 (E.D. Tex. Apr. 18, 2022). *See* Dkt. 142 at 7-8. But *RightQuestion* dealt with a claim reciting: “a ‘*second processor*’ *configured to facilitate a login* of the user... *wherein the user is logged in* to the external resource based at least in part on the output.” *RightQuestion*, 2022 WL 1154611, at \*8. The Court explained that the use of passive voice in this context implied that the recited *processor* is configured to perform the action of logging the user in, rather than the *user* performing that action. *Id.* at \*8-10. Notably, if passive voice had *not* been used here (e.g., if the claim would have recited “wherein the user logs in...”), the claim would have impermissibly allowed (and indeed *required*) user action to perform the claimed

functionality, because the claim would have recited “wherein the user logs in,” making clear that this would not merely reflect the configuration of the claimed “second processor.” *See id.*

Thus, *in the specific situation where passive voice is used **with respect to a user***, passive voice can be helpful in avoiding *IPXL*-style indefiniteness because it decouples the recited functionality from a user and may imply that a specific structure of the claim is configured to perform the recited functionality. But in *other* scenarios, passive voice simply introduces ambiguity regarding what (or who) may perform the claimed functionality, and decouples the functionality from *everything else* in the claim. Notably, the claim at issue in *RightQuestion* did not suffer from this problem, because the “wherein the user is logged in” limitation was contained *within* the claim limitation of “a second processor configured to: facilitate a login of the user,” thus making clear that it was the *processor* configured to facilitate a login of a user in a particular manner. *Id.* at \*8.

In contrast, in the IBM patents, *no structure at all* is recited for performing the claimed functionality, leaving open the possibility that the claimed method steps could be performed by anything or anyone. The claim recites that “the one or more central processing units and the one or more isolated environments are configured to interact with each other,” but then *separately* recites method steps that must occur within the system, thus clearly allowing a *user* to perform those method steps. The use of passive voice in this context leaves it entirely open-ended who or what performs the claimed functionality within the system, thus making it entirely “unclear whether infringement... occurs when one creates a system that *allows* the user to” perform the claimed method steps, “or whether infringement occurs when the user actually *uses*” the system to perform the claimed method steps. *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1384 (Fed. Cir. 2005).

Second, IBM's reliance on Dr. Stavrou's testimony that "created during installation" and "removed as part of an uninstall" are "functional capabilities of the system as claimed" (Dkt. 142 at 10) is unavailing. Of *course* in order for the system to be used in a manner that practices the claimed method steps, it must be functionally capable of doing so, such that functional capability is required. But the claims impermissibly recite both a system *and* a method of use of that system, as confirmed by Dr. Stavrou himself. Ex. A at 10:7-15 (agreeing that "in order to practice" the "created during installation" limitation," "the one or more isolated environments *must be created* during installation of the one or more applications"). Thus, functional capability is plainly insufficient under Dr. Stavrou's own testimony—the isolated environments must actually *be created* and *be removed* through use of the system, which is fatal to the definiteness of the claims.

- ii. **If not indefinite, the claims should alternatively be construed as requiring that the functionality of "creat[ing]" "the one or more isolated environments... during installation" and "remov[ing]" "the one or more isolated environments... as part of an uninstall" must be performed "independently of user intervention."**

In an attempt to make sense of nonsensical claims, IBM contends that "*the claimed system performs these functions* [relating to installation and uninstallation] *independently of user intervention*." Dkt. 142 at 10. As noted above, IBM's understanding of the claims is insufficient to avoid indefiniteness, because the Federal Circuit has stated that a requirement that the claimed system performing claimed functionality renders the claim indefinite unless the functionality is clearly tied to the capability of a specifically identified structure. "divorced from the recited structure." *UltimatePointer*, 816 F.3d at 827 (making clear that *IPXL*-type indefiniteness turns on whether claims "recite functionality divorced from the recited structure"); *HTC Corp.*, 667 F.3d at 1274 (making clear that if the recited functionality were tied only to the claimed system—a "mobile device"—the claim would have been indefinite). And notably, even IBM's own framing here requires the system to actually "*perform[] these functions*" (Dkt. 142 at 10), creating

ambiguity as to whether infringement occurs when the system is created or whether infringement occurs when the system actually performs the recited functions. *See HTC Corp.*, 667 F.3d at 1274 (reasoning that claims are indefinite if “they recite both an apparatus... and method steps” performed by the apparatus).

But if the Court *does* find the claims to be not indefinite, the Court should also hold IBM to its explicit representations that the recited functional steps of the patents must be performed “independently of user intervention.” *Id.* This alternative construction is necessary because IBM should not be permitted to represent one understanding of claim scope in claim construction briefing and then argue another understanding for its infringement theory.

Indeed, the threat that IBM will attempt to extend the claimed method steps to cover the method steps being performed in a manner *dependent on* user action is not a mere hypothetical possibility, but is instead *precisely* IBM’s infringement theory in this litigation. Specifically, IBM contends that a “virtual container” is an “isolated environment,”<sup>3</sup> and the documentation that IBM relies on for “creat[ing]” “the one or more isolated environments during installation” explicitly instructs *users* to “[c]reate a virtual container and connect it to the source machine” by issuing commands through the Administrative Console. Ex. B (IBM contentions for ’500 Patent) at 29. In other words, it is when *users* “[c]reate a virtual container” that the alleged “creat[ing]” “the one or more isolated environments during installation” occurs under IBM’s infringement theory.

Likewise, regarding the “wherein the one or more isolated environments are removed,” IBM relies on the following instruction to users: “After you have migrated an application and exercised it, *you can choose to dissolve the migration container.*” *Id.* at 40; *see also id.* at 41

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<sup>3</sup> Ex. B at 27-29 (relying on “[c]reat[ing] a virtual container” for the requirement that “one or more isolated environments are created...”)

(“Dissolve is a VirtaMove CLI utility that lets *you remove* VirtaMove encapsulation from the migration container....”); *id.* at 46 (instructing users: “To Delete and Recreate a Container... Create a backup copy of the container template.... [and] [d]elete the container”). In other words, it is when *users* dissolve a migration container or remove encapsulation from the container that an isolated environment is “removed” under IBM’s infringement theory.

IBM should not be permitted to deviate from its express representations to this Court that the recited functionality is performed “independently of user intervention.” Dkt. 142 at 10. Accordingly, to the extent the Court accepts IBM’s representation that the claims are not indefinite, the Court should also accept IBM’s representation that “a POSITA would have understood would have understood with reasonable certainty that the claimed system performs these functions independently of user intervention.” *Id.*

**B. “the system resources” (claim 19 of the ’500 patent and claim 19 of the ’038 patent)**

IBM’s Proposed Construction	VirtaMove’s Proposed Construction
Plain and ordinary meaning	Indefinite

“The system resources” of claim 19 of both the ’500 and ’038 patents is indefinite for lack of antecedent basis.

Claim 19 of the ’500 patent is generally representative. Claim 19 (and claim 18 from which it depends) recites:

18. A non-transitory computer readable storage medium comprising instructions for:

creating one or more isolated environments during installation of one or more applications;

updating the one or more isolated environments as the one or more applications use *additional resources*; and

removing the one or more isolated environments as part of uninstalling the one or more applications.

19. The non-transitory computer readable storage medium of claim 18 comprising instructions for maintaining mapping between ***the system resources*** inside the one or more isolated environments and outside.

Ex. 1 at claims 18, 19.

Notably, claim 19 uses a definite article “the” to introduce “system resources.” It is well known that “the” is used to refer to ***specific*** things, in contrast to indefinite articles “a” or “an” which refer to unspecified things.<sup>4</sup> Thus, when a definite article is used to introduce a claim element, it is necessary to identify the specific item to which it refers.

Here, IBM does not even ***allege*** a specific antecedent basis for “the system resources.” IBM correctly acknowledges that “Courts have consistently held the absence of ***explicit*** antecedent basis does not render a claim indefinite if its scope is reasonably ascertainable.” Dkt. 41 at 13. But here, IBM does not allege ***any*** antecedent basis (explicit, implicit, or inherent) that could cure the ambiguity regarding what “the system resources” refers to. *See generally id.* at 11-14 (alleging only that “the system resources” is clear in scope, but not identifying any explicit or implicit antecedent basis).

It is also clear that “the” is not a typographical error for “one or more,” *i.e.* this is not a situation where claim 19 introduces a new limitation. Dr. Stavrou specifically opined that claim 19’s “system resources” “are connected to” the “additional resources” recited in claim 18:

**Q.** And so you see in Claim 19 it refers to "the system resources."

And so my question is, what provides antecedent basis for the term "the system resources" in Claim 19?

**A.** So as we see here, this is a dependent claim and it depends on Claim 18.

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<sup>4</sup> *See generally* <https://www.merriam-webster.com/dictionary/definite%20article> (“The definite article is the; it is used to refer to ***identified*** or ***specified*** people or things, both singular and plural.”).

In Claim 18, I believe -- let me check -- the word "additional resources" is included as part of Claim 18, which is on the same -- on 14 I believe, 39.

And a person of ordinary skill in the art would have understood that *basically the system resources that are referred to in Claim 19 are connected to the additional resources that are mentioned in Claim 18.*

Ex. A at 11:16-12:6.

When asked to clarify whether the "additional resources" recited in claim 18 provide antecedent basis for the "system resources" in claim 19, his answer provided little clarity other than to assert that there are "other resources basically specifically mentioned by the claims, which is basically explicit":

**Q.** Okay. So your opinion is that these system resources of Claim 19 refers to the additional resources that Claim 18 recites. Is that correct?

**A.** My opinion is that the patent recites maintain mapping between the system resource and out -- inside and outside the one or more isolated environments in outside.

The system resources -- first (as read): "the system resources inside the one or more isolated environments and outside the -- is the isolated environment," as recited in the claims. So that here, to realize is that *the additional resources does not require an exhaustive list of full system resources, other resources basically specifically mentioned by the claims, which is basically explicit.*

Also, if you want me to elucidate, I'm happy to go on. You let me know.

*Id.* at 12:12-13:3.

When asked for clarification of this unclear testimony, Dr. Stavrou then walked back his testimony that "the system resources" of claim 19 were connected or related to the "additional resources" of claim 18, making clear that even Dr. Stavrou (a person of **greater** than ordinary skill in the art) is unable to clearly articulate the relationship between "the system resources" of claim 19 and any other resources.

**Q.** Yeah, I'm not quite sure I understand. *You previously testified, I thought, that the system resources of Claim 19 was related to the additional resources of Claim 18?*



A. ***I don't think that's correct.*** What I said is -- again, and I will repeat it just to be on the same [page].

Resources basically -- the term "system resources inside and outside the one or more isolated environments" ***indicates to a POSITA that claims contemplate any system resources that would satisfy the requirements of Claims 19 and -- 18 and 19,*** rather than requiring an exhaustive list of all system resources.

So I want to clarify here that I didn't mean an exhaustive list of all system resources but specifically what I just mentioned.

Ex. A at 13:5-21; *contra id.* at 11:16-12:6 ("the system resources that are referred to in Claim 19 are connected to the additional resources that are mentioned in Claim 18").

As also shown in the above testimony, Dr. Stavrou said that "the claims contemplate ***any*** system resources that would satisfy the requirements of" claim 18 and 19. But that is precisely the question—***which*** system resources satisfy the requirements of claims 18 and 19? Dr. Stavrou never gave a clear answer despite repeated attempts at clarification. *See, e.g., id.* at 16:21-17:4 ("Q.... So my question, then, is: The claim does not require, in your opinion, instructions for maintaining mapping between ***all*** of the system resources inside the one or more isolated environments and ***all*** of the system resources outside the one or more isolated environments. Correct? A. As I read it, it does not make a specification either way."); *id.* at 17:14-19 ("It's a generic term. Now, I don't know if it's going to be all the resources inside with all the resources outside or if it's going to be some of the resources inside; but the claim, as it's written, is not restrictive in that sense.").

Dr. Stavrou also made clear that in any system "there are finite resources, system resources." Ex. A at 17:5-18:9. Logically, because these "system resources" are inherent to a system, the "finite resources" within the system could potentially provide antecedent basis for "the system resources." *Cf. Bose Corp. v. JBL, Inc.*, 274 F.3d 1354, 1359 (Fed. Cir. 2001) ("There can be no dispute that mathematically an inherent characteristic of an ellipse is a major diameter. The prior recitation of 'an ellipse' therefore, provides the antecedent basis for 'an ellipse having a major

diameter.”). But notably, that is *not* IBM’s position—IBM is *explicit* that not “*every* system resource must be mapped.” Dkt. 42 at 12 (emphasis in original).

The lack of clarity of this term is exemplified by the penultimate sentence in IBM’s briefing regarding this term. Specifically, IBM urges the significance of the following:

Dr. Stavrou has offered unrebutted expert evidence confirming that a POSITA would have understood that “‘the system resources’ refers to the system resources inside the one or more isolated environments and outside the isolated environment[s], as recited in the claims.” Ex. 7, ¶ 59.

Dkt. 142 at 14. But this is literally just a recitation of the claim language—IBM is unable to provide any clarity beyond the circular allegation that “‘the system resources inside the one or more isolated environments and outside [the isolated environments]’” refers to *that exact claim language*, which of course is not helpful in resolving the critical question of “what is the antecedent basis of ‘the system resources’”? IBM does not even attempt to answer this critical question in either its construction or its briefing.

Given that neither IBM nor its expert can plausibly articulate what “the system resources” refers to, the Court should find the term indefinite.

### III. Claim Terms for the ’858 Patent

#### A. “appropriate for infrastructure configuration mapping” (claims 1 and 19)

IBM’s Proposed Construction	VirtaMove’s Proposed Construction
Plain and ordinary meaning	Plain and ordinary meaning, which requires an objective determination.

IBM’s brief expressly represents that whether something is “appropriate for infrastructure configuration mapping” is an “objective determination” rather than a subjective determination. Dkt. 142 at 14. In reliance on that representation, VirtaMove withdraws its indefiniteness challenge to this term, but requests a construction expressly requiring an objective determination.

**B. “instance of an image” (claims 1 and 19)**

IBM’s Proposed Construction	VirtaMove’s Proposed Construction
Plain and ordinary meaning, which is “an occurrence or copy of an image”	<p>Indefinite</p> <p>In the alternative:</p> <p>Image: a template that includes virtual hardware suggestions and a virtual disk containing at least an operating system.</p> <p>Instance of an image: a virtual machine derived from an image, which further includes virtual hardware allocations and a hypervisor of virtual machine runtime.</p>

Each independent claim of the ’858 patent requires that “at least one source infrastructure management component is an instance of an image.” The ’858 specification provides express definitions for the words “instance” and “image” in column 15:

Certain terms employed herein will now be defined: ...

Instance: An operating system instance together with all software running on this operating system. It may be physical (i.e., directly running on a server) or virtual (i.e., already running on a hypervisor).

Source instance: Instance as it is running on the source side, before migration.

Image: File representation of an instance.

Catalog image: Image in a cloud catalog, to be used if new instances are created in the cloud from scratch, rather than by rapid migration.

’858 patent at 15:7-39.

The definitions in column 15 meet the “exacting” standard for lexicography, which requires that the patentee “clearly set forth a definition of the disputed claim term,” and “clearly express an intent to define the term.” *GE Lighting Sols., LLC v. AgiLight, Inc.*, 750 F.3d 1304, 1309 (Fed. Cir. 2014). The ’858 inventors’ statement that “[c]ertain terms employed herein *will now be defined*,” followed by a dictionary-style list of words followed by their definitions, clearly indicates an intent to define the words “instance” and “image.”

The column 15 lexicography is clear on several points. It requires that an “image” is a file, specifically a file representing an “instance.” An “instance,” in turn, may be either physical or virtual, *i.e.* may run on either a server or hypervisor. An instance must comprise both an “operating system instance” and “all software running on this operating system.” But the lexicography’s recursive use of the word “instance” is at least potentially confusing. An “instance,” as defined, must include an “operating system instance,” *in addition* to other elements (*i.e.*, “all software running on this operating system”), thus nonsensically implying that an “instance” is both *distinct from* the “software running” (because the “operating system instance” is listed separately from “all software running on this operating system”), but also *includes* the “software running” (because the definition of “instance” both includes an “instance” *and* the other elements).

This lexicography introduces still further ambiguity. Specifically, replacing “image” with its lexicographical definition results in the phrase “instance of an image” being rewritten as “instance of [a file representation of an instance],” which is circular and thus unhelpful. IBM and Dr. Stavrou make no attempt to resolve this confusion and explain how a POSITA would understand the lexicography.

In short, the column 15 lexicography is circular and inconsistent with itself (although it does make clear that an instance represents *something* that comprises an operating system and all software running on that operating system).

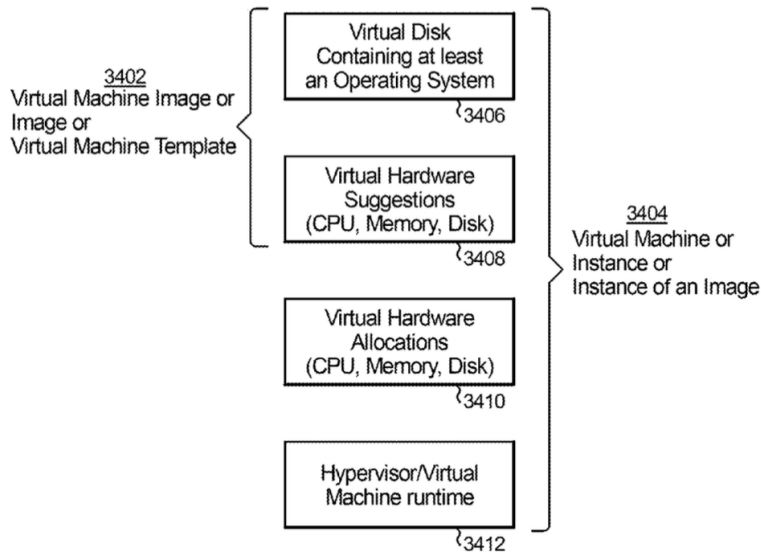
In an attempt to avoid the confusion caused by the recursive use of “instance” in the column 15 lexicography, VirtaMove had proposed a compromise construction based on a different portion of the specification, which contains the exact phrase at issue: “instance of an image”:

[R]eferring now to FIG. 34, in at least some embodiments, there are four states overall, as listed below. An “**image**” is offline/dormant/static, as in “**image**” of a virtual machine. An **instance** is a running virtual machine or registered to be able to run in a virtual machine, as in *an “instance” of an image*. As in FIG. 34, a “virtual machine **image**” or “**image**” or “virtual

machine template” 3402 includes a virtual disk 3406 containing at least an operating system, and virtual hardware suggestions 3408 such as CPU, memory, and/or disk. A “virtual machine” or “*instance*” or “*instance of an image*” 3404 includes 3406 and 3408, as well as virtual hardware allocations 3410 of CPU, memory, and/or disk, and a hypervisor of virtual machine runtime 3412. The aforementioned four states include:

1. an image which is existing independent of a hypervisor (i.e. file on a file system)—Virtual Machine *Image*
2. an image which is registered to a hypervisor (i.e. template or clone source)—Virtual Machine *Image*
3. a virtual machine registered to a hypervisor but is not running (i.e. powered off virtual machine)—Virtual Machine
4. a virtual machine registered to a hypervisor and is running (powered on virtual machine)—Virtual Machine

’858 Patent at 50:52–51:10. The accompanying figure illustrates the scope of “image” and “instance of an image”:



**Fig. 34**

This definition avoids most of the confusion of the column 15 definition. In particular, “instance” is not defined in terms of “image.” Instead, the column 50 definition confirms that an “image” must refer to the combination of a virtual disk containing an operating system with *suggestions* about what hardware to use, while an “instance of an image” is the combination of a

virtual disk with *allocations* of hardware. “Instance of an image” also requires as a virtual machine runtime hypervisor. In simpler terms, an “instance of an image” is a virtual machine that is either already running or is already allocated, ready to spin up at any time; an “image” needs to be instantiated before being run. The column 50 definition is also directly applicable to the claim language, because it includes a definition of the phrase “instance of an image,” not just the two component words.

The column 50 definition is in many ways consistent with the column 15 definition, except for one critical point: the column 50 definitions are limited to virtual machine embodiments involving a hypervisor, but the column 15 definitions expressly include both physical and virtual servers. This is a significant distinction, relevant to the ultimate issues of infringement and invalidity, and it needs to be resolved.

IBM does not even attempt to resolve the tension, instead affirmatively stating that “‘instance’ and ‘image’ can take on *alternative meanings* in other embodiments.” Dkt. 142 at 18. As explained above, the two “alternative meanings” here imply markedly different claim scope, *e.g.* whether or not a virtual machine hypervisor is required. This is the soul of indefiniteness: there are two plausible interpretations, which imply meaningfully different claim scope, and there is no clear way to choose between them.

A patentee in IBM’s position might be expected to embrace one of the two definitions, disavow the other, and explain its reasons; for example, because the patent claims one embodiment but not the other. Alternatively, a patentee might explain that the patent claims should cover both embodiments, and therefore a construction should be adopted that incorporates the limitations common to both definitions without excluding either embodiment. Here, that might imply that an “image” refers to a file containing an operating system (as both definitions require), but an

“instance” refers either to a virtual machine (as the column 50 definitions requires) or a physical server (as only the column 15 definition permits).

IBM instead takes the ambiguity as license to argue that *neither* definition applies, that “image” is not limited to *either* a virtual machine image *or* a representation of an instance, and that “instance” is used in a non-technical sense. IBM cites no authority suggesting that the presence of “alternative meanings” in the intrinsic record justifies *disregarding* the intrinsic record, as IBM asks this Court to do.

Other than the lexicography that IBM insists does not apply, IBM cites only a single excerpt of the specification relevant to “instance” or “image.” Dkt. 142 at 18-19 (quoting ’858 Patent at 44:45–51, 45:1–15, and Fig. 22). That example is unquestionably directed to virtual machines (consistent with VirtaMove’s proposed construction). But that passage does not support IBM’s rejection of the lexicography. Notably, each “image” in Figure 22 and the associated discussion is a file representing an instance, exactly as the column 15 definition explains. Immediately before IBM’s quotation, the specification explains that “[R]eferring to FIG. 22, the process begins with an original *image* 2212 (after physical-to-virtual (‘P2V’) translation).” ’858 Patent at 45:1–3. The specification elsewhere makes clear that physical-to-virtual translation means what it sounds like: an operation creates a virtual machine image representing a physical instance, including both operating system and applications. *See, e.g., id.* at 21:9–14 (“If the source instance 520 in the customer environment 402 is still physical, a P2V operation (physical-to-virtual) will be involved as shown at 536. There are standard tools for this, e.g., the aforementioned PlateSpin tool, and the VMConverter tool available from the aforementioned VMware, Inc.”); *see also* Dkt. 142 at 21–22 (IBM’s explanation of P2V technology as an example of the claimed “capturing” step). The original image 2212 is thus specifically an image that can be used in a virtual machine, consistent

with the column 50 lexicography. The subsequent images 2216 and 2218 are “snapshots... of instance 2232 and instance 2234,” again completely consistent with both lexicographic definitions.

This passage also uses “instance of an image” consistent with the column 50 lexicography. IBM’s brief quotes with approval that “an *instance of the* original *image* is started at 2230.” Dkt. 142 at 18 (emphasis in original). This is again consistent with the definitions. For example, instance 2230 is something actually running (“started”) as required by both definitions. And it plainly could be a virtual machine as required by the column 50 definition. So *IBM’s only cited example of “instance” or “image” is consistent* with the stated lexicography, and does not support IBM’s contention that “instance” just means “an occurrence of copy” and “image” needs no construction.

Instead of discussing the specification’s consistent usage of “image” and “instance of an image,” IBM insists that a POSITA would understand the meaning of the term by reference to a *different* claim term, “source infrastructure management component.” Dkt. 142 at 18. Indeed, IBM suggests the two terms are coextensive, saying that the claims “provide that ‘at least one source infrastructure management component’ in the ‘source computing system’ *is* ‘an instance of an image.’” Dkt. 142 at 19 (emphasis in original). IBM seems to on “a server, a client, configurations, logs, and processes” as being “examples” apparently illustrating what is meant by “instance of an image.” *Id.* (citing ’858 Patent at 34:23–25). To be clear, as IBM acknowledges, these are not examples of “instance” or “instance of an image”; the actual sentence in the patent begins “In some cases, *the infrastructure components include* one or more of infrastructure clients. . . .” ’858 Patent at 34:23. If the patentee had merely claimed a “source infrastructure management component,” or if that were the disputed term, this quotation would be potentially relevant.

Lacking any support for its position in the intrinsic record, IBM turns to extrinsic evidence, which of course cannot override the intrinsic record. *See, e.g., Genuine Enabling Tech. LLC v.*



*Nintendo Co.*, 29 F.4th 1365, 1373 (Fed. Cir. 2022) (“{E}xpert testimony may not be used to diverge significantly from the intrinsic record.”). The conclusory statement of Dr. Stavrou that “in the field of computing, the terms ‘image’ and ‘instance’ are widely understood terms that do not require any further construction for a POSITA to grasp their meaning with reasonable certainty” does nothing either to rebut the lexicography or to resolve the critical question: which definition applies? Ex. 7, ¶ 76 (cited at Dkt. 142 at 20). Likewise, VirtaMove’s U.S. Patent No. 7,784,058 and its usage of “instance” is at best extrinsic evidence, if relevant at all. *See* Dkt. 142 at 20.

At the risk of stating the obvious: the phrase “wherein said at least one source infrastructure management component is an instance of an image” does not imply that “source infrastructure management component” and “instance of an image” are the same thing. Rather, a *subset* of source infrastructure management components are also instances of an image; otherwise the limitation would be surplusage. If a patent claimed “a vehicle, wherein the vehicle is a car,” we understand that not every vehicle is a “car”; any other interpretation would render the “wherein” clause superfluous. But that is precisely what IBM asserts, contrary to two express lexicographical definitions within the specification.

IBM’s attempt to disavow what the patentee represented to the public should be rejected. Either the claim term is indefinite, or IBM should be held to the lexicography in the patent itself.

### C. “capturing” (claim 1)

IBM’s Proposed Construction	VirtaMove’s Proposed Construction
Plain and ordinary meaning	Plain and ordinary meaning, which is “transferring into a file”

The parties nominally agree that “capturing” has a plain and ordinary meaning and is used in its plain and ordinary sense. On that basis, and to streamline proceedings, VirtaMove withdraws its indefiniteness challenge. But IBM’s opening brief indicates that IBM intends to pursue and

interpretation of this word that directly contradicts the claim context. Specifically, IBM argues that the term “capturing,” even considering the claim context, has a scope that would “include recording, acquiring, or extracting data, inputs, or events from a system, environment, or stream.” Dkt. 142 at 21. That understanding is plainly inconsistent with the plain language of the claim in context and should be rejected.

Claim 1 recites “capturing” a specific thing: the at least one source infrastructure management component. The source infrastructure management component is required to be an instance of an image. And the “capturing” is for a specific recited purpose: “for migration to said target cloud infrastructure.” IBM does not and cannot give any explanation how a POSITA would apply its purported “plain and ordinary meaning” to the claim context. For example, an instance of an image is not an “environment” or “stream,” and it makes no sense to “record” “inputs” from it for migration to a target cloud infrastructure. Under IBM’s interpretation, the scope of “capturing” would extend to, for example, a remote desktop application that monitors keystrokes and mouse inputs at the source computer and transmits them to the cloud infrastructure.

This is not plausible. Rather, the claim expressly recites capturing *the source infrastructure management component*, not capturing a *part* of it, an *input* from it, or an *event* from it. And the thing captured must be susceptible of “migration to said target cloud infrastructure.” VirtaMove’s alternative proposed construction is the product of a genuine attempt to fairly capture the full scope of the term’s plain and ordinary meaning in context.

IBM incorrectly argues that the specification discloses an embodiment of “capturing” that produces something other than a file. Dkt. 142 at 22 (citing ’858 Patent at 10:42–43, 10:54–55, 19:18–43, Fig. 5, and Fig. 7). Figure 5 and the corresponding description in column 10 includes step 536, the “instance capture step,” which can be a physical-to-virtual or virtual-to-virtual

process. '858 Patent at 10:33–43. In an exemplary embodiment, this is implemented by step 534 “p2v and v2v using PlateSpin (or other suitable tool). Ends in a vmdk file.” *Id.* Fig. 5. The text reiterates the figure, stating that the “end result” of exemplary step 534 is a “Virtual Machine Disk Format (VMDK) file.” *Id.* at 10:41–43.

IBM’s argument relies on the next paragraph, which explains:

[I]n step 538, the *captured instances* are then transported into the cloud location 410 via network 514. ***Data 544 outside the boot disk may be transported separately from the aforementioned vmdk file*** (seen at 542), in particular if it is large and the data transport might start earlier. As noted at 540, the *instances and data* are transported through network 514 using appropriate tools to control the transfer. Non-limiting examples of such tools include the aforementioned PLATESPIN tool, as well as the Softek Transparent Data Migration Facility (TDMF®) tool for data (registered mark of International Business Machines Corporation, Armonk, N.Y., USA). ***Data 544 is typically not affected by special aspects of MIaaS cloud, i.e., it can be migrated and linked back with the vmdk in usual ways. Thus further details about the data 544 are omitted from the figure to avoid clutter.***

'858 Patent at 10:52–67. This paragraph has nothing to do with the claimed “capturing” step, which corresponds in Figure 5 to steps 536 and 534. It describes instead a subsequent “transport” step 538, which has no counterpart in the claims. that the unclaimed transport step, as explained, includes transporting two separate things: (1) the “captured instances” produced by the capturing step, and (2) data 544 outside the captured instance.

Data 544 is not a product of the capturing step. For example, there is no reference to “captured data” analogous to the specification’s use of “captured instances.” The reference to “instances and data” also indicates that those are two separate things, as does the recitation of an IBM “Transparent Data Migration Facility” specifically for controlling the transfer of “data.” As indicated in the last sentence, data 544 mentioned nowhere else in the specification, because it can be handled “in usual ways” unrelated to the purported invention. Data 544 is, in short, at most tangentially related only to a step *other than* the claimed “capturing” step. The fact that data 544

is separate from the captured instance thus does not establish that the “capturing” step can produce some output other than a file.

Accordingly, the Court should reject IBM’s contention that the claimed “capturing” step can “include recording, acquiring, or extracting data, inputs, or events from a system, environment, or stream.” Dkt. 142 at 21.

**D. “non-functional requirement” (claims 3-5 and 7)**

IBM’s Proposed Construction	VirtaMove’s Proposed Construction
Plain and ordinary meaning	Indefinite

IBM does not purport to provide any definition of “non-functional requirement”; for example, neither IBM nor Dr. Stavrou even attempt to give a plain English understanding of what “non-functional requirement” means (such as, e.g., a requirement unrelated to the functionality of the system, which is something VirtaMove asked IBM about during the meet and confer process).

Rather than even allege an identifiable “plain” meaning for this term, IBM merely cites to the claim language and file history as purportedly giving guidance. *See* Dkt. 142 at 23-25. IBM’s citations to the claim language are unavailing, however, because the claim language does not give any guidance as to what “non-functional requirements” are. *See* Dkt. 142 at 23-24. IBM alleges clarity stating that “‘non-functional requirement’ refers to specific requirements used in each specific context, such as mapping the source management infrastructure with the target management infrastructure.” *Id.* at 24. Yes, the claims require that descriptions of non-functional requirements be mapped, but the claims give no guidance as to what the “non-functional requirements” that are described *must be*. IBM appears to suggest that *any* “specific requirements” that would otherwise meet the claim language satisfy the “non-functional requirements” limitations, but such an approach would improperly read out “*non-functional*” from the claims.

IBM next points to the specification as providing “clear guidance.” *Id.* at 23, 24-25. But the portion of the specification IBM relies upon merely confirms the ambiguity of this term. For example, the claim says that an “application-level description” can include “an *SLA or non-functional requirement, but SLA’s can be seen as non-functional requirements as well.*” *Id.* at 24 (quoting Ex. 4 at 39:40-49). According to IBM, “*SLA’s are well-understood agreements.*” Dkt. 142 at 25. But the specification makes clear that despite the agreements being well-understood, they might *or might not be* non-functional requirements. Ex. 4 at 39:40-49 (implying that SLAs might or might not be considered non-functional requirements). Dr. Stavrou testified that an SLA might “have both” such that there would be only a “portion of the SLA that can be used for non-functional requirements,” but IBM, Dr. Stavrou, and the intrinsic record provide no clarity as to *which portions of an SLA would or would not constitute non-functional requirements.*

Given that the specification makes clear that “well-understood agreements” can be interpreted in one of two inconsistent ways, the specification does not provide any clarity on this term. And given IBM’s inability to articulate any coherent (even high-level) meaning of what non-functional requirements *are*, the term should be held indefinite.<sup>5</sup>

**E. “module” (claim 18)**

IBM’s Proposed Construction	VirtaMove’s Proposed Construction
Plain and ordinary meaning. Not subject to 35 U.S.C. §112, ¶6.	Subject to 35 U.S.C. §112(6), and is indefinite ( <b>withdrawn</b> )

<sup>5</sup> Alternatively, given the ambiguity of the intrinsic record, the Court should apply the close paraphrasing of “requirements unrelated to the functionality of a system” so that IBM is unable to take advantage of the obvious ambiguity of the intrinsic record in taking a position inconsistent with the plain English words of this claim term.

In reliance on IBM’s representations that “(1) the discovery tool module performs the function of ‘discovering’ using the structure of ‘a source computing system having a source management infrastructure’; (2) the description module performs the function of ‘querying’ using the structure of ‘a database to obtain a description of a target cloud infrastructure’; and (3) the infrastructure comparison engine module executes the function of ‘analyzing’ using ‘said at least one source infrastructure management component’” (Dkt. 142 at 27), VirtaMove withdraws its argument that these terms are subject to 35 U.S.C. § 112(6) . VirtaMove intends to hold IBM to its representations that these identified structures are used by the claimed “module[s]” to perform the recited functionality.

**F. “cloud infrastructure” (claims 1, 4–6, 8–12, and 19)**

IBM’s Proposed Construction	VirtaMove’s Proposed Construction
Plain and ordinary meaning, which is “a network of interconnected nodes.”	Plain and ordinary meaning, which is: an infrastructure comprising a network of interconnected nodes that provides for on-demand self-service, broad network access, resource pooling, rapid elasticity, and measured service providing transparency for both the provider and consumer of the utilized service.

IBM argues that every network of interconnected nodes is *ipso facto* a “cloud architecture.” IBM is literally removing the limitation “cloud” from the claim. Under the proposed construction, the computers in the Court’s chambers would be a “cloud infrastructure,” as would every computer network over the past five decades. Indeed, taken literally, IBM’s proposal would mean that a railway network, a phone network, and the Interstate Highway network are also “cloud infrastructure.” It is clear, even from common sense and the examples above, that a POSITA would recognize that “cloud infrastructure” has some meaning beyond just “a network of interconnected

nodes,” even though interconnectivity of nodes *is* a **requirement** of “cloud infrastructure.” IBM’s construction is not plausible and should be rejected.

The ’858 patent specification confirms that more is required for cloud computing than merely a network of interconnected nodes. The very first words of the “detailed description” state: “Cloud computing is . . . .” ’858 Patent at 4:9. The next column and a half constitute an unattributed quotation from the literal “Definition of Cloud Computing” published by the National Institute of Standards and Technology (“NIST”). *Compare id.* at 4:9–5:28 with Ex. C at 2-3. A citation to the NIST definition also appears on the face of the patent, informing a POSITA that this is, in fact, a “Definition.” ’858 Patent, page 2. This express extrinsic evidence definition, **repeated** in the specification, provides some reasonably certain scope of “cloud infrastructure.” gives some reasonable explanation of what “cloud infrastructure” actually is. VirtaMove’s proposed construction attempts to fairly distill this definition into something understandable to a jury.<sup>6</sup>

IBM’s allegation that the recited “characteristics” of cloud computing recited in the patent are merely optional, rather than essential, is contrary to a POSITA’s understanding as shown by extrinsic evidence published by **IBM itself**, expressly written from the perspective of a POSITA. *See* Ex. D (available at <https://www.redbooks.ibm.com/redbooks/pdfs/sg248324.pdf>) at ix (“This IBM® Redbooks® publication discusses the real world experience of an enterprise that developed and implemented IBM z/OS® cloud services.... This book introduces the basic cloud concepts as defined by the National Institute of Standards and Technology (NIST).”). Specifically, IBM’s own publication makes clear that there are “five **essential** characteristics of cloud,” and lists **each** of the elements of VirtaMove’s proposed construction as all being “essential.” *Id.* at 6-7 (“The five

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<sup>6</sup> IBM implies that “cloud infrastructure” and “cloud computing” are unrelated, but it is clear even from IBM’s cited intrinsic evidence that a cloud infrastructure is used to provide cloud computing capabilities. *See* Dkt. 142 at 30 (citing Ex. 4 at 5:29-33).

essential characteristics of cloud are introduced in this section.... On-demand self-service.... The essential cloud characteristic of broad network access.... Resource pooling is considered an essential characteristic of cloud computing.... Rapid elasticity.... Measured service....”).

IBM and Dr. Stavrou do not meaningfully address this extrinsic evidence showing how a POSITA would have understood the essential requirements of cloud computing that must be enabled by a cloud infrastructure, just as the ’858 specification teaches. Instead, IBM and Dr. Stavrou largely base their positions on a clear misapprehension or misunderstanding of the correspondence between IBM and VirtaMove during the meet and confer process.

Specifically, IBM incorrectly asserts that “VirtaMove previously conceded that IBM’s proposed construction, ‘a network of interconnected nodes,’ is an acceptable meaning of ‘cloud infrastructure.’” Dkt. 142 at 30 (citing Ex. 5 at 8). Not so. Page 5 of exhibit 8 contains a statement by **IBM’s** counsel, not VirtaMove’s counsel, making that assertion. IBM originally refused to provide *any* construction of “cloud infrastructure,” and in order to clarify what the scope of dispute between the parties was, VirtaMove “asked whether IBM agrees that ‘cloud infrastructure’ requires *at least* ‘a network of interconnected nodes’ so that [VirtaMove] can understand the dispute between the parties.” Ex. 5 at 8. In response, **IBM** responded: “We agree that ‘cloud infrastructure’ is an acceptable meaning for ‘a network of interconnected nodes.’” *Id.*; *see also id.* at 2 (“[IBM’s] responses to [VirtaMove’s] questions and proposals are inline in blue below.”). VirtaMove never agreed that this was an acceptable meaning of “cloud infrastructure,” and VirtaMove made clear, directly in response to the “acceptable meaning” statement, that “in light of the intrinsic and extrinsic record we maintain our full proposed construction.” *Id.* at 8.

This misunderstanding or mischaracterization influences Dr. Stavrou’s testimony as well. Specifically, he opined that VirtaMove’s construction was incorrect based on his understanding



that “VirtaMove agreed [that] ‘a network of interconnected nodes’ is an acceptable meaning for ‘cloud infrastructure.’” Ex. 7, ¶ 106 (citing no evidence for this understanding).

Dr. Stavrou also does not explain why his opinion, which he formed based on a misunderstanding of what VirtaMove had agreed to, outweighs the patent specification’s definition, the NIST definition, and IBM’s own publication which makes clear that the elements cited by VirtaMove’s construction are “*essential*” to cloud computing. Ex. D at 6-7. Dr. Stavrou provides only a single conclusory sentence saying that he reviewed that publication, as well as the original NIST definition (Ex. 7, ¶ 108), but he did not provide any rationale whatsoever as to why his opinion formed as part of litigation should be attributed more weight than a publication authored by IBM’s own engineers outside the context of litigation. Ex. 7, ¶ 108 (alleging in conclusory fashion that “my review of the prosecution file history and extrinsic evidence cited by IBM and VirtaMove also does not change my opinion”).

Because both the intrinsic and extrinsic record make clear that the plain meaning of cloud infrastructure is an infrastructure that provides for five essential components reflected in VirtaMove’s proposed construction, VirtaMove’s construction should be adopted. IBM’s proposal, which would extend cloud infrastructure to *any* network of interconnected nodes (regardless of whether it has anything at all to do with cloud computing) should be rejected.

#### **IV. Conclusion**

For the foregoing reasons, VirtaMove respectfully requests that its proposed constructions be adopted.

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Respectfully submitted,

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**CERTIFICATE OF SERVICE**

I certify that this document is being served upon counsel of record for Defendants on March 7, 2025 via CM/ECF.

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